

*Picea albertiana* sp. nov. — A slender tree, attaining a height of over 15 m. Twigs and sterigmata smooth and shining or occasionally slightly glandular but never glaucous, yellowish-brown when young becoming darker with age; sterigmata strongly reflexed and standing out frequently more than 1 mm. from the twigs: leaves pale-blue or blue-green, surrounding the stem and crowded toward the upper side, at the ends of the branches, 1.5 cm. to 2.5 cm. long, 4-sided, with 3, 4, or sometimes 5 rows of stomata on each side, incurved, acute or acuminate with a rigid tip: cones ovate, bright-crimson when young, at maturity 2.5 cm. to 3.5 cm. long and nearly as broad when expanded, early deciduous; scales stiff and rigid, broadly rounded at the apex, entire, broader than long, cinnamon-brown with a chestnut edging and shading to darker chestnut toward the base; bract 2 mm. or less long, 1 mm. broad, with a sharply angular, more or less acute erose tip.

Type no. 796, *S. Brown*, Bankhead, Alberta.

The common spruce of the lower altitudes through the Canadian Rockies in Alberta and British Columbia, differing from *P. canadensis* (Mill.) B. S. P. in the longer, strongly reflexed sterigmata, shorter, broader and darker colored cones, with broadly rounded scales and minute sharply angled bracts, and from *P. Mariana* (Mill.) B. S. P. in the lighter colored, smooth twigs with longer sterigmata, and light-blue or blue-green leaves, and cones with broader, entire scales with angular-tipped bracts.

STEWARTSON BROWN.

ACADEMY OF NATURAL SCIENCES,  
PHILADELPHIA.

## PROCEEDINGS OF THE CLUB

APRIL 24, 1907

The meeting was called to order at the museum building of the New York Botanical Garden, at 3:40 P. M. with Dr. M. A. Howe in the chair. Twenty persons were present.

The minutes of the meeting of March 27, 1907, were read and approved, and also a note recording the postponement of the stated meeting of April 9th, 1907.

Mr. Edward B. Chamberlain, 38 West 59th St., N. Y. City, was nominated for membership.

The resignation of Mrs. H. A. DeCoster, dated March 25,

1907, was read, and the death of J. Schneck, M.D. was reported. On motion the resignation of Mrs. DeCoster was accepted.

A communication to Dr. N. L. Britton, from Professor L. R. Jones was read, containing an invitation to the Torrey Club from the Vermont Botanical Club, to join the latter in its annual field meeting at Pownal, July 1 to 3. Dr. Britton had already replied to the invitation and it was received and ordered to be placed on file.

An invitation was read from the New York Academy of Sciences inviting the Torrey Botanical Club to participate in the celebration of the two hundredth anniversary of the birth of Carl von Linné, on May 23, by sending an authorized representative, and by presenting an official document, commemorative of the life and work of Linné, to be read at the exercises.

It was unanimously voted that Dr. Rusby, the president of the Club, act as the authorized representative of the Club at the coming celebration, and, on vote, the chairman of the meeting was authorized to appoint a committee, with power, to arrange for the preparation of the commemorative document to be read at the anniversary exercises. The following committee was appointed: Dr. W. A. Murrill, Mrs. E. G. Britton, Dr. Tracy E. Hazen.

The program committee was, on vote of the Club, authorized to arrange, if possible, to hold the next meeting of the Club at Teachers College, Columbia University.

By unanimous consent the secretary cast the vote of the Club electing Mr. Chamberlain to membership.

The following scientific program was presented:

“Ecological Distribution of the Beach and Dune Flora about Chicago, Ill.,” by Miss Mary Perle Anderson.

Miss Anderson gave a brief account of the geological history of the ancient Lake Chicago and its succession of beaches, the Glenwood, the Calumet, and the Toleston. These ancient beaches were formed by changes in the lake-level and at the present time are indicated by ridges of wooded land more or less parallel to the present coastal beach of Lake Michigan. The ridges are separated by the low level prairie land which makes up the Chicago plain.

The formation of the dunes along the present shore of the head of Lake Michigan was considered, and also the changes in the flora that may be noted as one passes from the naked shifting dunes and extremely xerophytic conditions of those recently fixed, to the dunes farthest inland, where mesophytic conditions prevail. Certain grasses, species of *Calamagrostis*, *Andropogon*, *Ammophila*, and *Elymus*, do much to bind the dunes. The first trees to appear are the cottonwood and certain willows, which are also of value in fixing the dunes. The scrub-oak and black oak soon appear and are followed by the bur-oak, the white oak, and the red oak. *Pinus Banksiana* is followed by the white pine; the pig-nut hickory is succeeded by the shag-bark; other trees, such as the basswood, ash, cherry, and black walnut, come in, and on the most mesophytic slopes of the oldest dunes and beaches one finds the sugar-maple and, more rarely, the beech, hemlock, and southern tulip-tree. Corresponding changes in the shrubby and herbaceous vegetation occur, and at Stevensville and Porter, one may pass in a short time, from extreme desert conditions through successive stages of the open forest of low trees and shrubs to the oak-hickory type and finally to the beech-maple-hemlock combination, which indicates the culmination of the forest in this region.

The usual ecological factors, heat, light, water, soil, wind, and direction of slope, all have their influence on the floral distribution. Conditions in the dunes are extreme. Thus, for example, the trailing-arbutus and the bearberry, both northern types, may appear on the north-facing slope of a dune, while just over the crest, on the south-facing slope, the cactus may flourish.

Emphasis was laid on the fact that species vary with environment, often losing more or less of their xerophytic adaptations under mesophytic conditions; that a plant-society is only a stage in the development of a region; that the apparent tendency is for all to approach the mesophytic condition.

The paper was discussed by Dr. Grout and Dr. Rydberg.

"Some Relations between Habitat and Structure in Mosses," by Dr. A. J. Grout.

Xerophytic mosses apparently tend to develop short, thick-

walled leaf-cells, often with papillae over the lumen. Nearly all mosses with papillae over the lumen of the cell are xerophytic, or belong in groups that are largely xerophytic. Presumably the papillae tend to retard transpiration.

Pleurocarpous mosses growing on trees tend to develop short thick-walled cells, especially at the basal angles of the leaves, and a similarity of leaf-structure in the tree-growing mosses due to this fact has produced much of the confusion and uncertainty in classifying such mosses, *e. g.*, *Alsia*, *Dendroalsia*, *Bestia*, *Groutia*, and their relatives.

Tree-growing mosses also tend to develop erect capsules, and the correlated imperfect peristomes. To some extent this seems to apply to other xerophytic mosses.

Aquatic or subaquatic pleurocarpous mosses have an apparent tendency to develop enlarged and inflated alar cells.

Cleistocarpous and gymnostomous mosses appear, for the most part, to be mosses of various relationships adapted to damp soil, not closely covered with other vegetation, and best suited to support a rather short-lived annual moss.

The speaker recognized numerous exceptions to the above relationships, if stated as general principles, but, stated as tendencies, he believes they are worthy of serious consideration by the systematist, the morphologist, and the ecologist.

A brief discussion followed.

The Club adjourned at 5:20 P. M.

C. STUART GAGER,  
*Secretary.*

MAY 14, 1907

The meeting was called to order at the American Museum of Natural History with President Rusby in the chair. One hundred and four persons were present.

The reading and approval of the minutes for April 24 was followed by the presentation of the names of the following persons for membership:

Mr. Theodore Gottschalk, 2311 Second Ave., N. Y. City;  
Mr. W. H. Liebelsperger, Fleetwood, N. J.

The committee appointed at the preceding meeting to arrange

for the preparation of the commemorative document to be read at the celebration, by the New York Academy of Sciences, of the two hundredth anniversary of the birth of Carl von Linné, reported, through the secretary, that Professor Underwood had been appointed to prepare the document, and had accepted.

On motion the secretary cast the ballot of the club, electing to membership the persons nominated.

The scientific program consisted of a symposium of four papers on the subject of "Trees." Each paper was illustrated by lantern views. The symposium was opened by Professor L. M. Underwood, who spoke on "Some Historic American Trees." Mr. William Solotaroff discussed "The Planting and Care of Shade Trees," giving an interesting account of the preparation for planting in the nursery, methods of transplanting along highways and streets, the dangers that threaten shade trees, and briefly of the means of protection against these dangers.

Dr. E. B. Southwick spoke on "Trees in Winter," showing views taken in Central Park, and elsewhere in and about Greater New York. The last number was by Dr. N. L. Britton, who showed a selection of colored lantern slides from the Van Brunt collection, illustrating the flowers and fruits of common trees.

At the conclusion of the regular program, Mr. Edward R. Taylor, of Penn Yan, N. Y., exhibited some beautiful, and botanically interesting, samples of vegetable silk, and fabrics woven from it, together with the raw material of which it is made. The process of its manufacture from cotton-seed cellulose was briefly described, and samples of "artificial horse-hair," made by treating ordinary cotton thread with the dissolved cotton-seed cellulose, were also exhibited and the process of its fabrication briefly described.

The Club adjourned at 10:30 o'clock.

C. STUART GAGER,  
*Secretary.*

#### NEWS ITEMS

Dr. J. E. Kirkwood has recently been promoted to a professorship of botany in Syracuse University, and the botanical work there is now recognized as an independent department of the university instruction.